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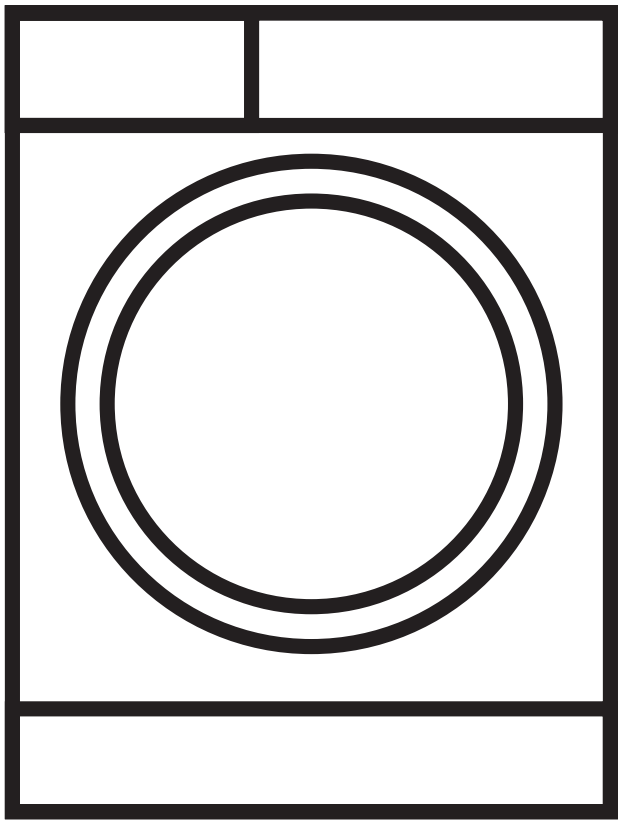
Service Manual

Drum Washing Machine

A1/D1(4.5/5.0/6.0/7.0kg)



Note:

Before serving the unit,please read this at first,
Always contact wih your service center if meet problem.

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1.SAFETY PRECAUTION

1.Do not try to repair the machine by yourself. The machine may be damaged and its life be shortened. What is worse, it will injure yourself.

2.Pull out its plug from the power socket before maintenance. Electricity!

3.Do not use several power plug with one socket.
To avoid fire, don't use any socket with its actual current more than rated current.

4.Please check the power plug and socket whether damaged or not.
To avoid an electrical shock and fire, the power plug and socket should be replaced if they are damaged.

5.Don't try to clean up the washing machine with water, or else, it's possible to cause an electrical shock or fire and shorten its life.

6.Forbid the harness contact with water for avoiding wet and don't extend it during maintenance. Don't twist the harness to avoid it distorted.

7.Please clean up the dirt and dust on the surface of the cabinet, harness and connection parts during maintenance.
Please avoid fire because of the electric leakage of harness.

8.Check electrical parts, harness whether they have become moist and replace them if they are wet.

9.Check all parts of the machine and make sure to keep them in good condition after maintenance.

10.Fasten upon the power plug and pullit out .
Be careful of a fire and electric shock when power cord is damaged.

11.Pull out its power plug when this machine doesn't work.
Be careful of an electric shock and fire because of levin.

12.Don't put tinder or sprayer beside the washing machine.
Be careful of a fire and explosion because of electric spark.

13.Don't put a basin of water or wet clothes on the washing machine.
It is possible to cause an electric shock or fire if water from wet clothes leaks in to the washing machine.

14.Do not place the washing machine in the place where it can be exposed to rain and snow. Or else, it may cause an electric shock or fire, and therefore shorten its life.

15.Don't press the button with sharp items such as nail, screw etc. Or else, it may cause an electric shock or other damages.

16.This machine should be placed on the horizontal ground and installed correctly. The machine is liable to shift on the gradient ground.

17.If the harness is damaged, it should be replaced completely.

18.It is necessary to put a mat on the floor and recline down the washing machine along its side when repair it. It is possible to damage the electrical components if the front of the washing machine is placed at the ground.

19.During changing the heater of this machine, please check whether it is fixed on the blanket correctly and whether the screw is fastened tight or not.

2.INTRODUCTION OF PRODUCTS

2.1 Characteristics of product

It is the latest designed machine, which have many advantages such as fashion, large rated washing capacity and large washing range. Specifically, its feature is as following:

1.Large washing range from cotton to wool and silk.

2.Gentle washing: no twist and little abrasion.

3.Electron auto-balance system, that is, the PCB panel controls the speed of spin and ensures uniform distribution of clothes to reduce the wear of textile caused by its vibration.

4.The drum of this machine is made of stainless steel of high quality and the cabinet is durable.

5.The maximum temperature of washing water could be controlled independently and it is up to 90℃.

6.Unique washing methods: rain, soak, throwing-knocking knead and so on, which can wash clothes uniformly and improve washing performance.

7.Safety guard: water level control, door lock etc.

8.Anti-crease function: there is an automatic anti-crease and soak function in the synthetic program, that's, it doesn't drain at the end of washing and leave the clean extile in the water of the drum to achieve the function of less crease, especially silk.

9.Function of adjusting speed : select different spin speed according to textile.

10.Electronic water distribution system: The machine uses PCB to control the inlet valve and distribute water properly at the different stages and dissolve detergent and softener absolutely to improve washing performance.

2.2.Working principle

Drum washing machine wash clothes mainly in virtue of mechanical friction, chemical force and temperature force. When the machine works, the motor runs clockwise several seconds and runs anti-clockwise several seconds to drive the drum whose three lifters hold up the clothes pressing against the inside of the drum. When clothes rise close to the top, because the speed of motor is low and the centrifugal force is not enough to overcome the gravity, clothes fall and impinge with washing liquid (like manual throwing-knocking washing). The second force is the extrusion force of clothes (like manual extrusion). The last force is the friction between clothes,clothes and lifters(like manual knead). To improve washing performance, automatic drum washing machine could automatically heat the washing liquid, whose temperature can be adjusted from 30℃ to 90℃. The high temperature quickens the movement of the numerator of the washing liquid and speedups the Chemical reaction. In a word, drum washing machine destroys bonding force between dirt and clothes in virtue of intergraded force of water, detergent and mechanical force, to clean away the dust.

3.TROUBLESHOOTING

3.1 Malfuction and solution

Description	Solution
The washing machine does not work	Close the washing machine's door. Confirm and press the start key.
Water leakage	Correctly connect the inlet water pipe.
The spin of the clothes is abnormal	Reload and distribute the laundry evenly in the drum.
Thereis the peculiar smell in the washing machine	Run a Self-clean cycle without any clothes.
No water is visible in the drum	No fault-water is under the visible area.
There is the remaining water in the softener's box	No fault- the effect of the softener will not be affected.
The remaining detergent is left on the clothes	The water-fast component of the non-phosphorus detergent will be left on the clothes to form the line scale. Plesae select 【rinse】 or【 spin 】programme or brush away the fleck with the brush when the clothes is dried.
The washing machine does not fill	Open the water tap. Check the selection of the procedure. Check the water Pressure to seeif the water pressure is insufficient. Put through the feed-water. Close the washing machine's door. To check it the inlet water pipe is bent or blocked.
The washing machine fills and empties at the same time.	Make sure the end of the drainage pipe to be higher than the water level of the inside the machine . Check if the drainage pipe and sewage have been sealed, if they have been, there will be the poor ventilation to cause the siphonage effect.
No drainage of the washing machine	Check if the drainage pumps is blocked. Check if the drainage pipe is bent or blocked. Check the height of the drainage nozzle, make sure it is 0.6-1 meter from the bottom of the washing machine.
Vibration of the washing machine	Level the washing machine. Fasten the footing. To check if the internal packing for the transportation have all been removed.
The bubble spills from the detergent box	Check if the detergent is excessive, if it is the specialized detergent for the cylinder washing machine. Dip one scoop of the softener mixed with 1/2 liter of water to the detergent box II. Reduce the usage amount of the detergent in the next time's wash.

3.TROUBLESHOOTING

Description	Solution
The machine stops when the procedure has not been finished	Power failure or water cut.
The drainage pump has noise during the operation when the water has just been drained	The inner barrel water of the washing machine has been drained but there is still a small amount of water in the drainage pump and pipe. The drainage pump continuously operates and takes in the air, and at this time there is the noise, which is normal situation.
To stop for some time during the wash procedure	The washing machine adds water automatically. Because there is too much bubble in the tube, the washing machine is cleaning the bubble.
If you cannot solve the above abnormal situations, would you please, 1. To turn the procedure knob to 【OFF】, pull out the attachment plug; 2. to close the water tap, and contact the nearest service centre.	

3.TROUBLESHOOTING

3.2 Schedule of failure alarm

A1-D1 has no display screen; the alarm display is as below :

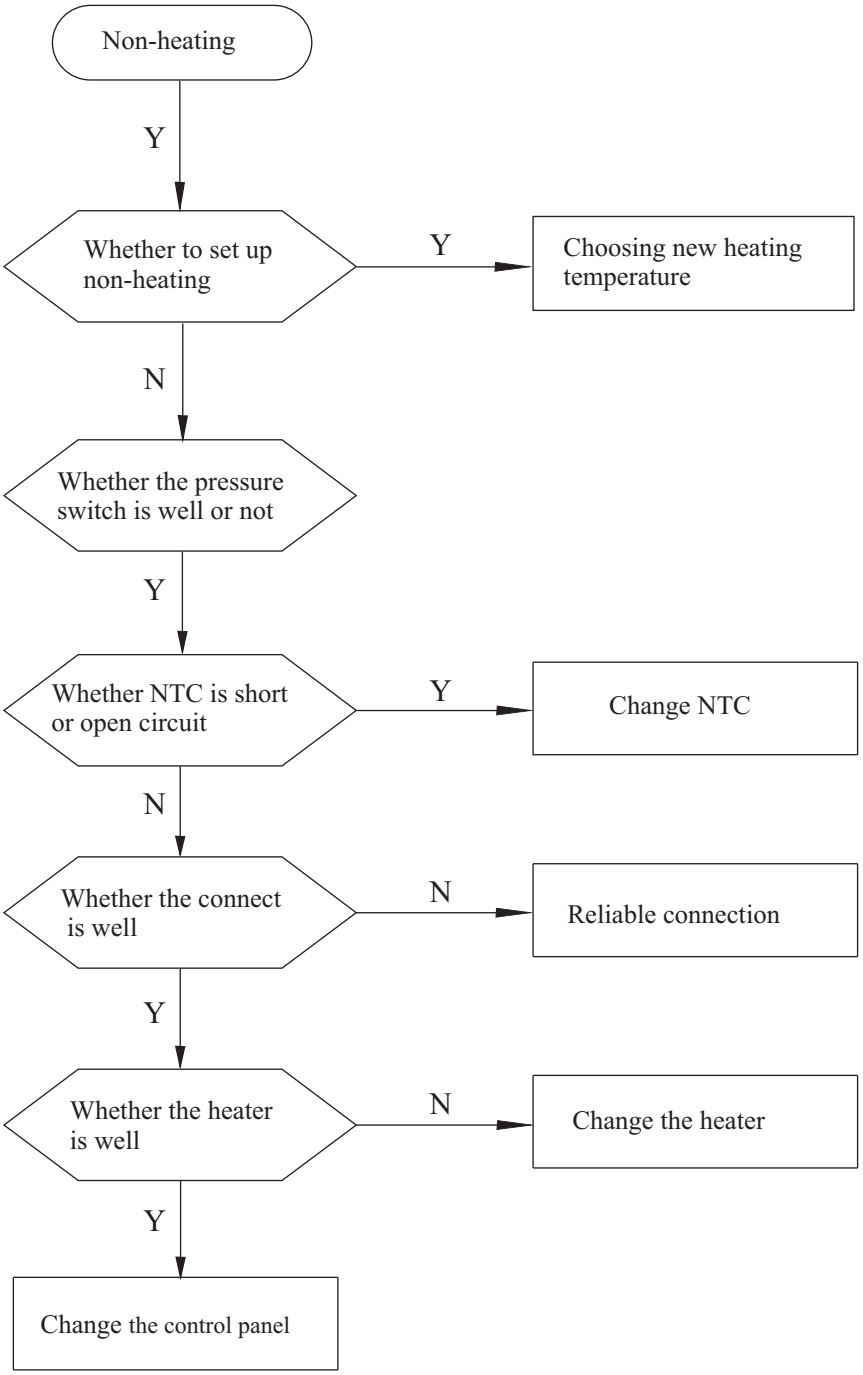
Status of Corresponding Indicators				Description	Reason	Solution
Temp.90	Temp.60	Temp.40	Temp.cold			
Off	Off	Off	Flash	Door lock problem	Door is not closed properly.	Restart after the door is closed
					Please call up service line if there are still troubles.	
Flash	Off	Off	Off	Water injecting problem when washing (water injecting time exceeds 5 minutes)	Tap is not opened or water flows too slowly. Inlet valve filter is blocked. Inlet pipe is twisted. If water is not supplied	Open the tap or wait till the water supply becomes normal. Check inlet valve filter. Straighten the water pipe Check the other taps in the room.
					Please call up service line if there are still troubles.	
Off	Off	Flash	Flash	Drain problem while washing (drain time exceeds 9 minutes)	Outlet hose is blocked or twisted Drain pump is blocked	Wash and straighten outlet hose. Wash drain pump filter
					Please call up service line if there are still troubles.	
Please call up the service line if there is any other problem.						

It suitable for use these model :A1/D1

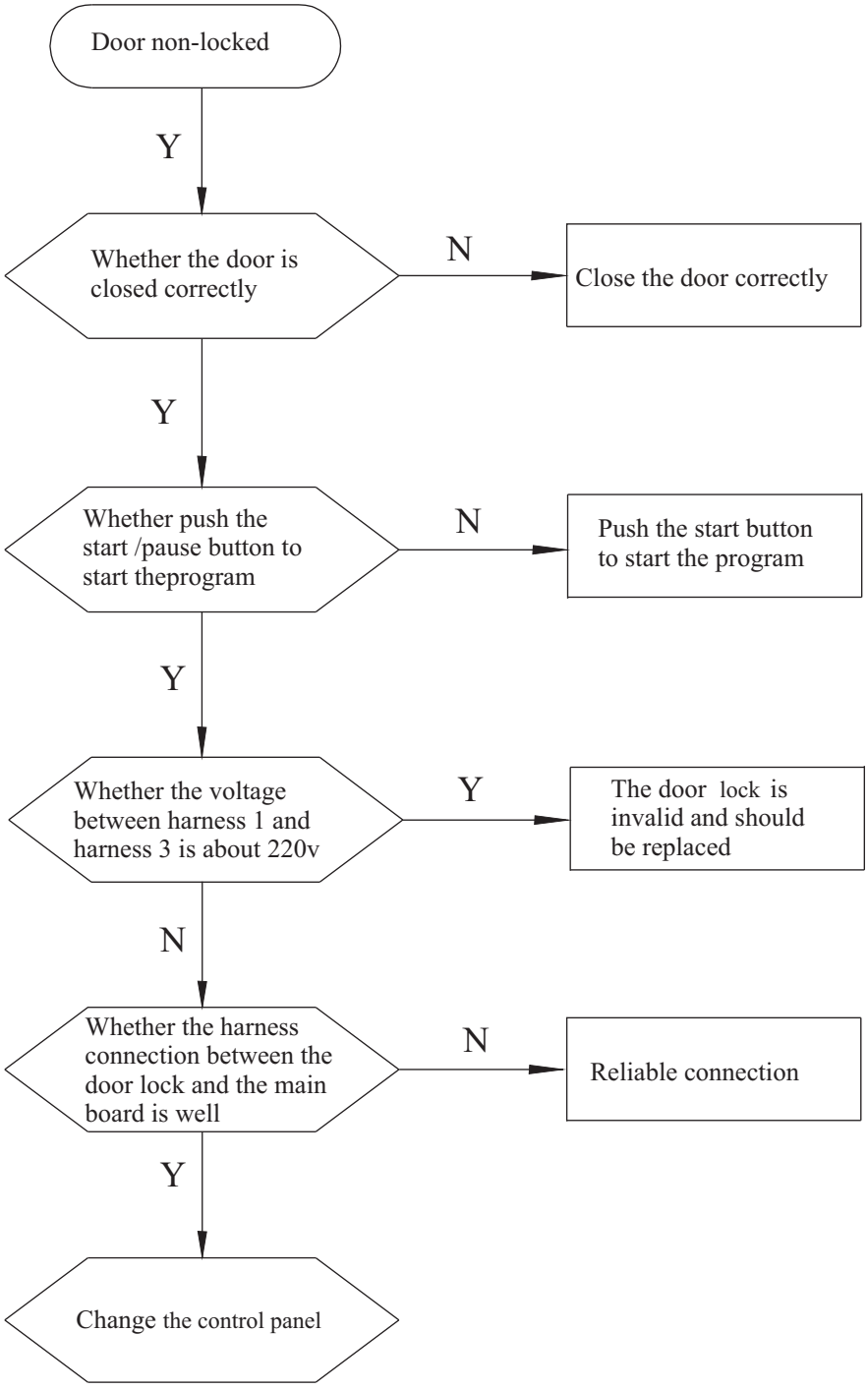
3.TROUBLESHOOTING

3.3Fault tree

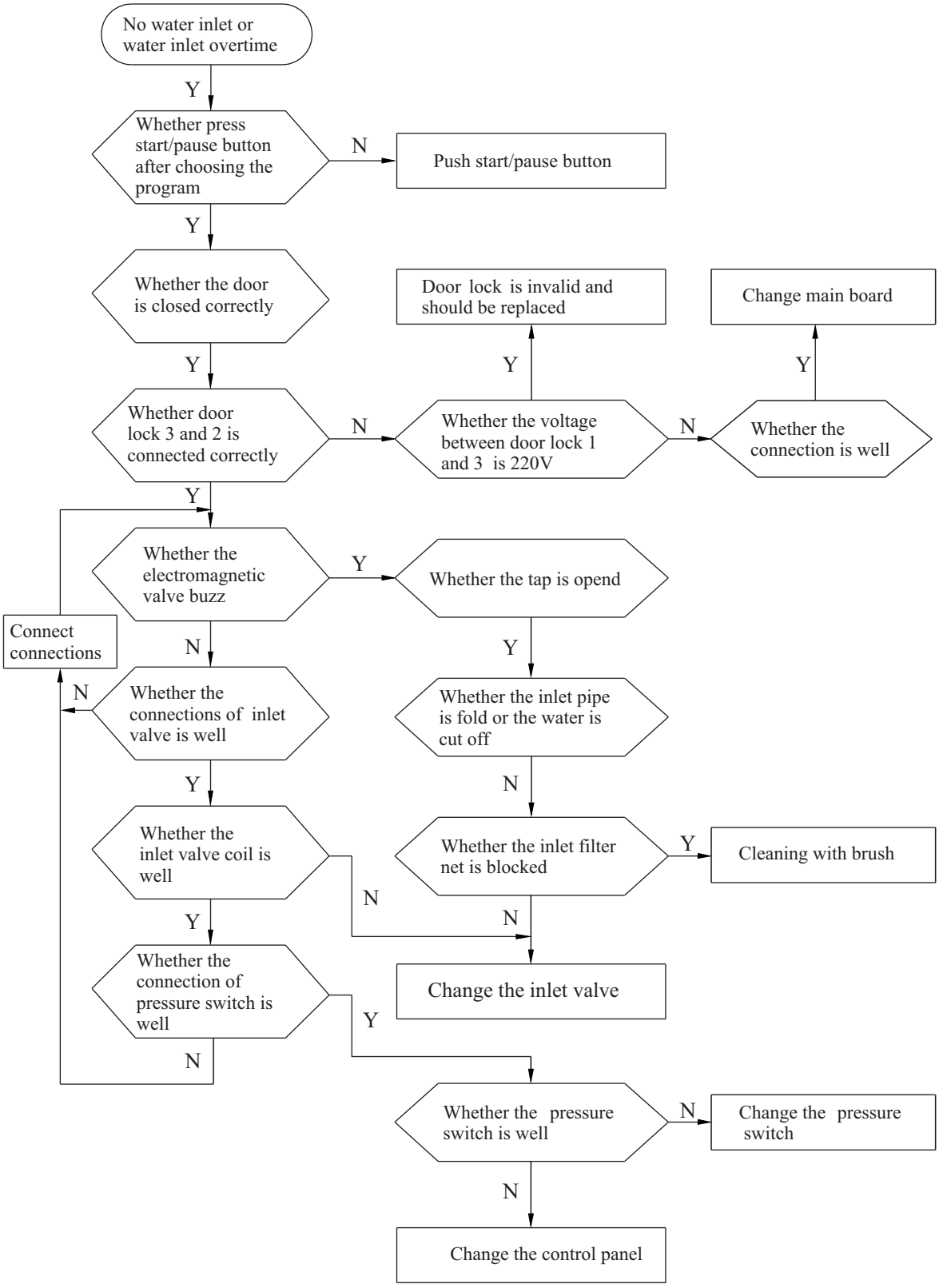
1. Maintenance non-heating malfunction



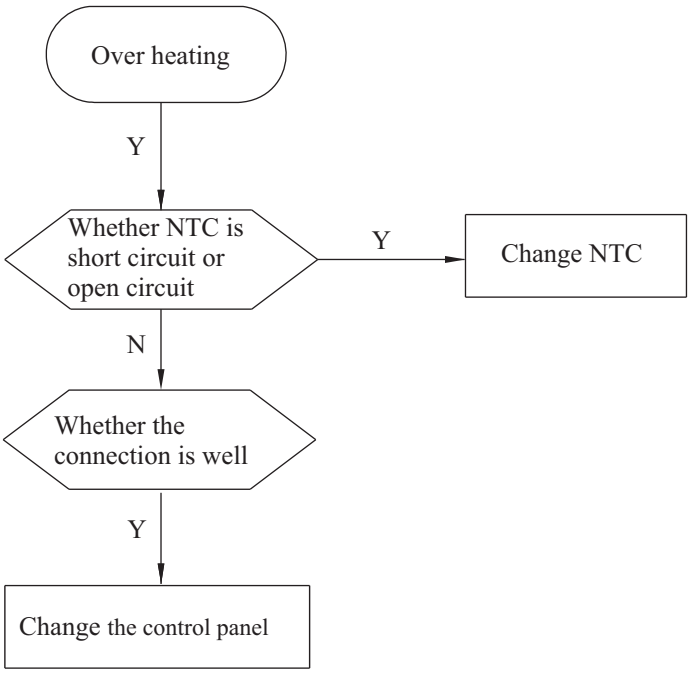
2. Door non-locked & its maintenance



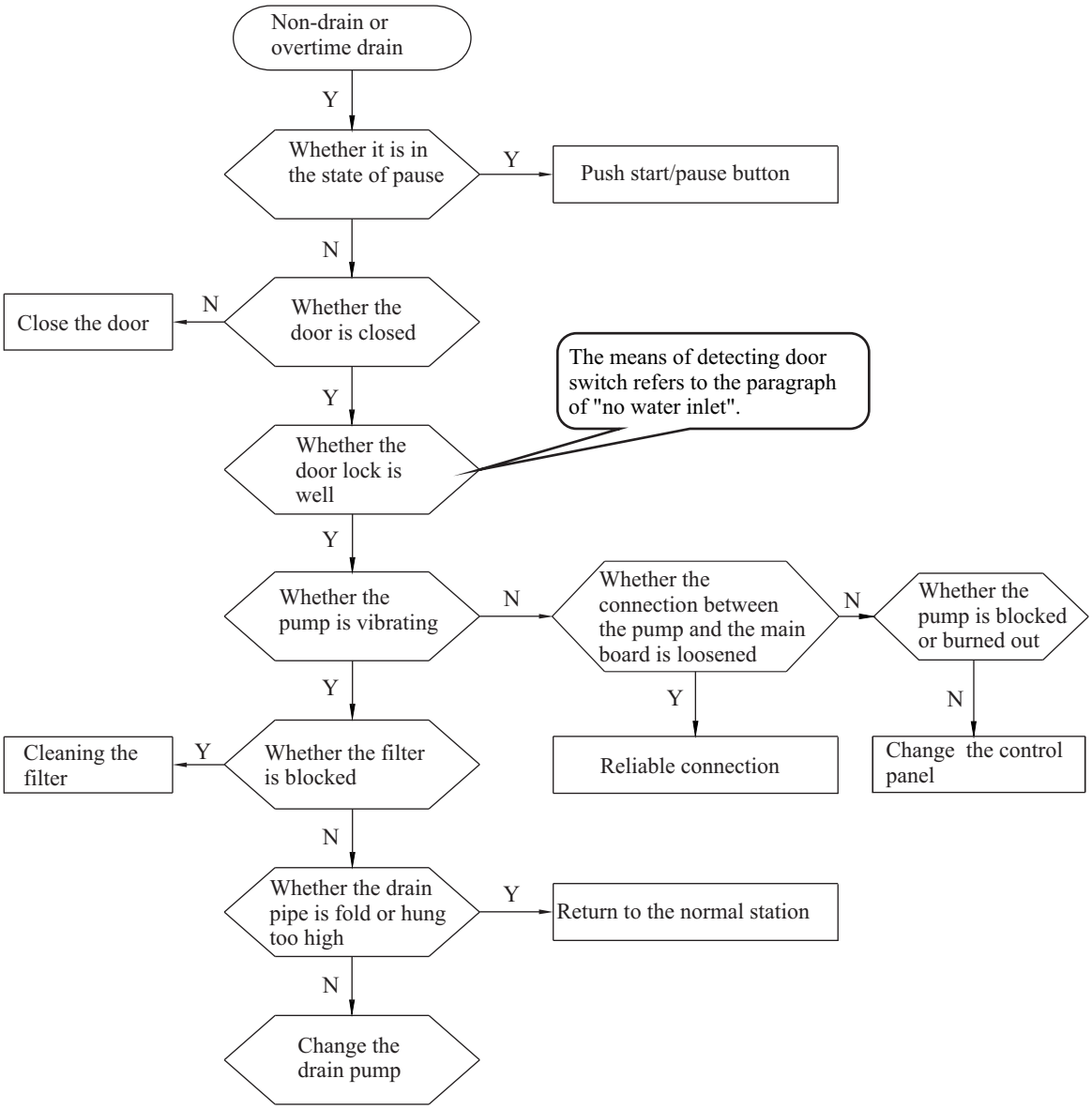
3. No water inlet or water inlet overtime



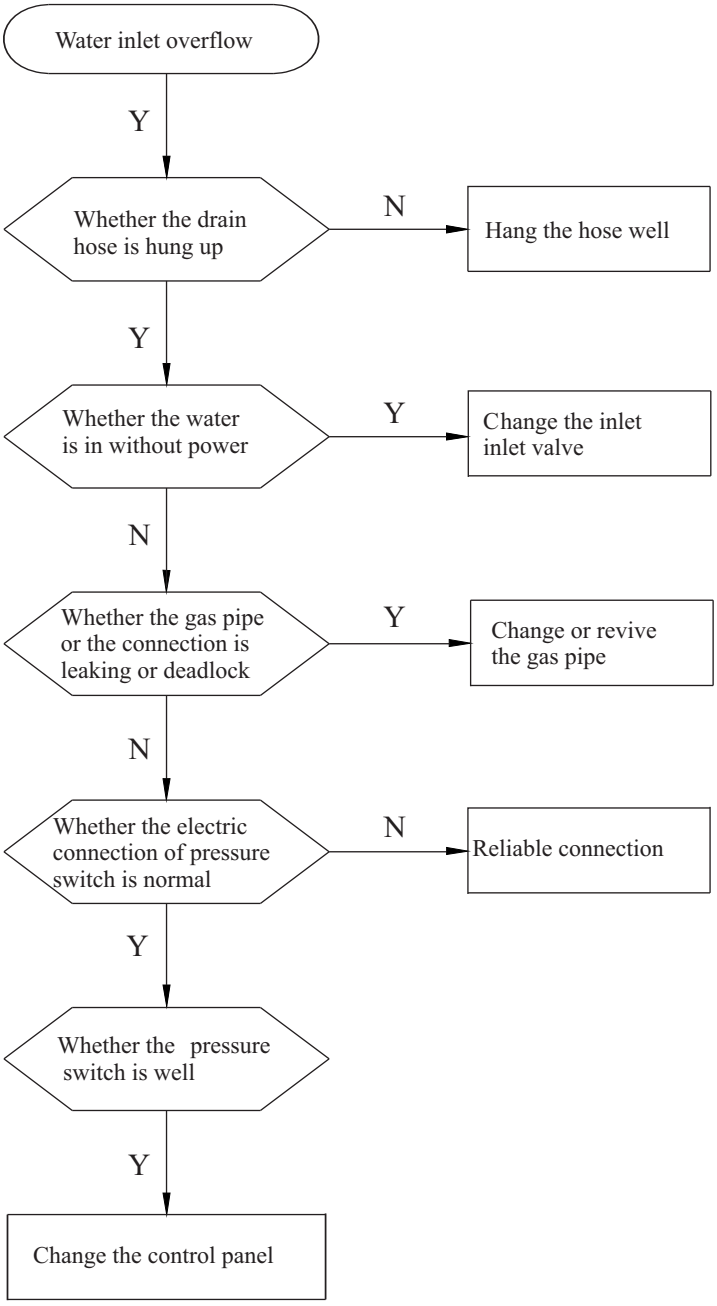
4. Heating beyond the setting temperature its maintenance



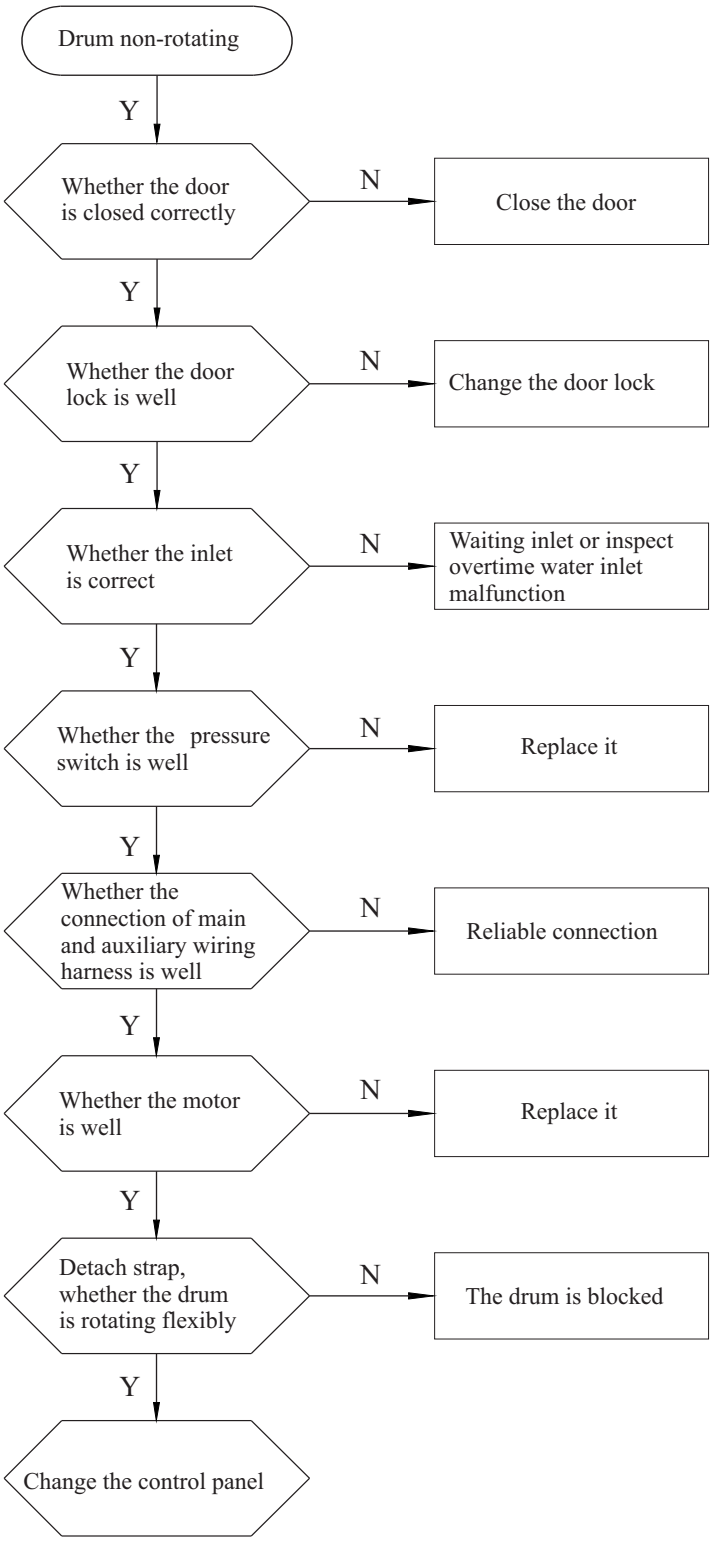
5. Maintenance of non-drain or drain exceed the setting time



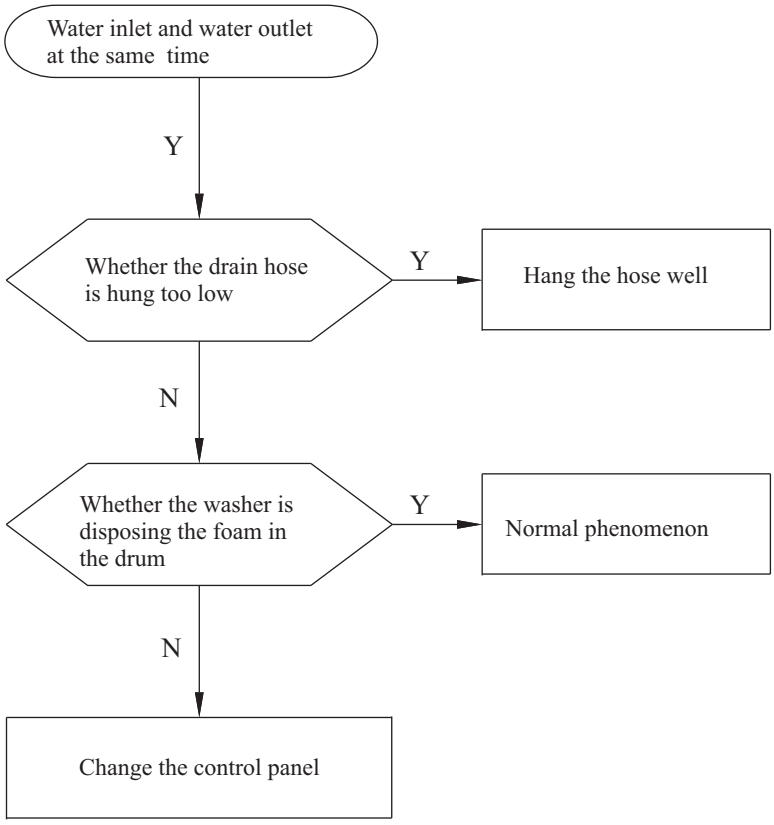
6. Water inlet overflow malfunction maintenance



7. Drum non-rotating malfunction maintenance



8. Maintenance water inlet and water outlet at the same time

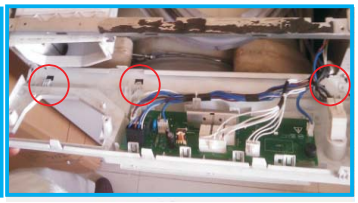


4.UNPACKING WAYS OF MAIN PARTS

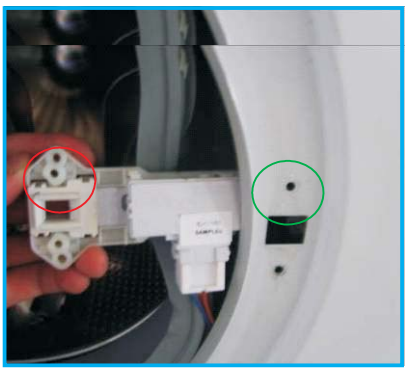
4.1 Overeview the unpacking step

1. Undo the back cover
2. Undo top cover
3. Undo the control panel
4. Undo the lower panel
5. Undo the door lock
6. Undo the front plate
7. Undo the facade counterweight
8. Undo the gasket
9. Undo the PCB panel
10. Undo the detergent box
11. Undo the inlet valve
12. Undo the pressure
13. Undo the pulley
14. Undo the upper counterweight
15. Undo the absorber pin
16. Undo the filter
17. Undo the drain pump
18. Undo the heater
19. Undo the NTC
20. Undo the door glass
21. Undo the panel support
22. Undo the drum tub assembly
23. Undo the absorber
24. Undo the motor

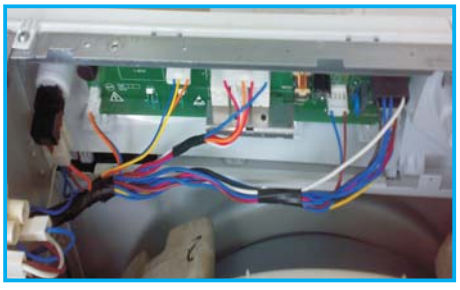
4.UNPACKING WAYS OF MAIN PARTS

Operation step	Picture
1 Undo the back cover Undo two screws fit between back plate and cabinet, and then pull out the back plate .	
2 Undo top cover ① Undo 2 screws fit between the top cover and back cabinet . ② Push back the top cover 15mm until it leaves away from, the control panel, and then take it down.	
3 Undo the control panel ① Departing the top cover (means as above) . ② Draw out the detergent drawer . ③ Loosen two screws fit on the control panel (facial). ④ Loosen two screws fit on the control panel(top) .	
⑤ Press three clasps between top control panel and panel support. ⑥ Take out the control panel inclined from the cabinet .	

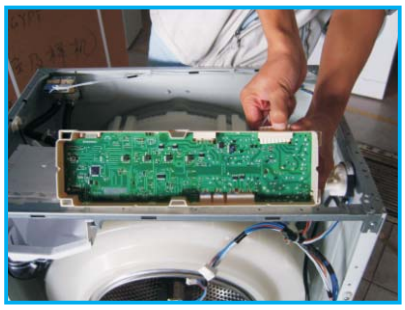
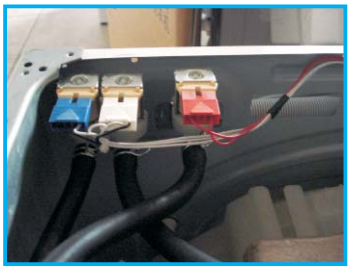
4.UNPACKING WAYS OF MAIN PARTS

Operation step	Picture
4 Undo the lower panel ① Open the filter cover, release the screw on the lower panel. ② Turn the washing machine back at an angle, pinch the clasp ,and push it out.	
5 Undo the door lock ① Open the door of washing machine. ② Take the outer gasket clamp to the drum.	
③ Remove two screws on the door lock, and take down the door lock. ④ Take out the door lock and draw out the plug; pay attention to the position of the plug so as not to connect a wrong circuit next time.	
6 Undo the front plate ① Undo the door lock (methods as followed). ② Remove the lower cover(methods as followed).	

4.UNPACKING WAYS OF MAIN PARTS

Operation step	Picture
③ Undo five screws in the front plate. ④ Put the front plate up to the clasp of the front plate away from the loading holder, and then take off the front plate.	
7Undo the facade counterweight ① Undo the front plate (methods as followed). ② Remove six screws pull out the facade counterweight.	
8 Undo the gasket ① Undo the top cover, control panel, lower cover, machine door and the front plate(methods as followed). ② Remove the outer gasket clamp between the door seal and the front plate . ③ Loosen the inner gasket clamp between the door seal and the front of the outer tub, and take out the gasket.	
9 Undo the PCB panel Undo the top cover and control panel(methods as followed).	

4.UNPACKING WAYS OF MAIN PARTS

Operation step	Picture
Undo the PCB from the E-housing PCB panel: draw out the plug after remove the screws and then undo the PCB panel.	
10 Undo the detergent box ① Undo the top cover and the control panel (methods as followed).	
② Release the hose clamp and pull out the inlet hose. ③ Release the hose clamp and pull out the detergent box hose, and then take out the detergent box.	
11 Undo the inlet valve ① Remove the top cover (methods as followed). ② Undo 2 screws between cabinet and inlet valve.	

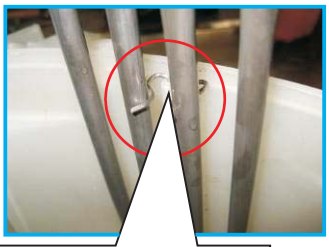
4.UNPACKING WAYS OF MAIN PARTS

Operation step	Picture
③ Release the clamp fixing the inlet valve and the inlet hose, and then pull out the inlet hose. Take out the inlet valve and plug. Pay attention to the position of the plug so asnot to connect a wrong circuit next time	
12 Undo the pressure switch ① Undo the top cover (methods as followed). ② Pull out the plugs on the pressure switch. Mind the position of the plug to avoid error during the following assembly. ③ Loosen the pressure switch hose clamp, and pull out the hose from the pressure switch interface. ④ Rotate the pressure switch anticlockwise by 90º, and then pull out the pressure switch.	
13 Undo the pulley ① Undo the back cover (methods as followed). ② Rotate the pulley and at the same time pull out the belt, and then remove the belt . ③ Remove the screw on the pulley and then take down the pulley.	

4.UNPACKING WAYS OF MAIN PARTS

Operation step	Picture
14 Undo the upper counterweight ① Undo the top cover (methods as followed). ② Remove three screws fit on the upper counterweight and then pull out the upper counterweight .	
15 Undo the absorber pin ① Undo the front plate (methods as followed). ② Use pliers to pinch the absorber pin's protuberance, and knock the absorber pin out from back lightly; in the same way, remove the other one.	
16 Undo the filter ① Open the filter cover. ② Rotate the filter knob anticlockwise, and then pull out the filter.	
17 Undo the drain pump ① Undo the top cover, control panel, lower cover and front plate(methods as followed). ② Nip out clamp between the drain hose and the drain pump, and then pull out the drain hose.	

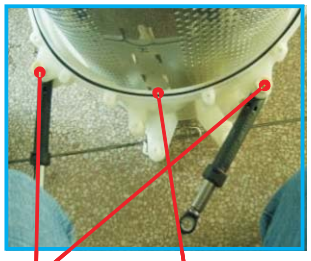
4.UNPACKING WAYS OF MAIN PARTS

Operation step	Picture
③ Nip out the clamp between the outlet hose and the drain pump, pull out the outlet hose. ④ Loosen the screws fitted on the drain pump, and then pull out the drain pump .	
18 Undo the heater ① Undo the top cover, control panel, lower cover and front plate(methods as followed). ② Pull out the heater plug. Pay attention to the position of the plug so as to not connect a wrong circuit next time .	
③ Release the screw fixing the heater. ④ Take out the heater.	 In the red circle it is the heater support, clamping the heater. Heater NTC
19 Undo the NTC temperature sensor ① Undo the top cover, control panel, lower cover and front plate(methods as followed). ② Undo the NTC with special tools.	

4.UNPACKING WAYS OF MAIN PARTS

Operation step	Picture
20 Undo the door glass ① Open the door, remove two screws fixing the hinge and front plate, and then remove the door. ② Remove six screws on the inner door. ③ Remove the outer door and the inner door with special tool. ④ Take out the door glass. 21 Undo the panel support ① Undo the top cover (methods as followed). ② Undo the control panel. ③ Remove two screws fixing the panel support, and then remove it.	
22 Undo the drum tub assembly ① Remove the motor in 24(methods as followed). ② Pull out the heater. ③ Remove the belt.	
④ Remove the screws fixing the pulley, and then take out the pulley.	

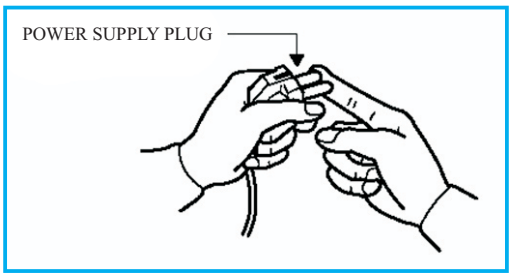
4.UNPACKING WAYS OF MAIN PARTS

Operation step	Picture
⑤ Remove the screws fixing the front and rear tub, and then remove the tub. ⑥ Remove the inner drum kit.	
23 Undo the absorber ① Lift out the outer tub kit (means as 21 above). ② Undo the absorber pin between absorber and rear tub, remove the absorber.	
24 Undo the motor ① First let the machine lie down on the back and then pull out the motor wire and grounding wire. Use spanner to remove the motor screw, and lift up the motor with the other hand in case of falling to the drain pump .	
② After two screws are removed, change the motor. First support it to clasp the correct position, then install the screws, and then install the belt .	

5.CIRCUIT DIAGRAM

5.1 During the failure diagnosing and changing components, please do it as following:

1)There is some static harm to the electrical parts from colophony in the washing machine or humans. So it is better to eliminate the potential static by grounding the humans or touching the plugs.

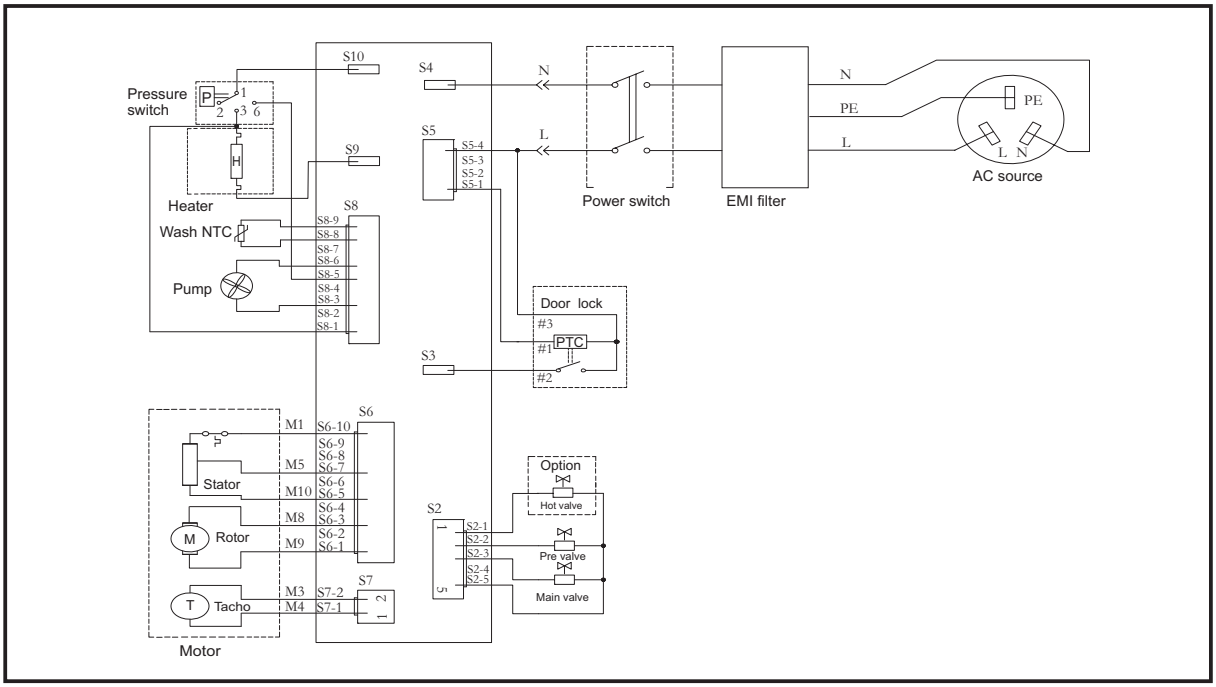


2)The rated voltage of the SCR in PCB is 220-240V, so it's possible to be electrical shock. Please take care while strong and weak electricity is alternative.

3)The design of PCB is out of failure, so prohibit to change the PCB panel according to its alarm. Please do it according to the failure diagnose program.

5.TROUBLESHOOTING

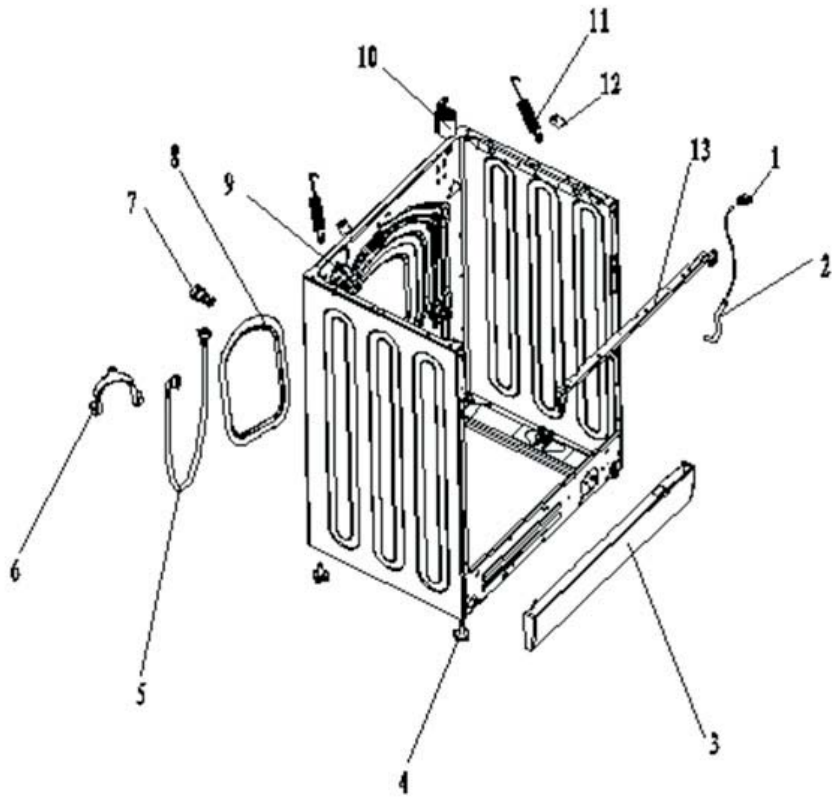
5.2 The circuit program & wiring connection figure



6.EXPLORED VIEW & LIST OF PARTS

6.1 Explored view & List of Parts

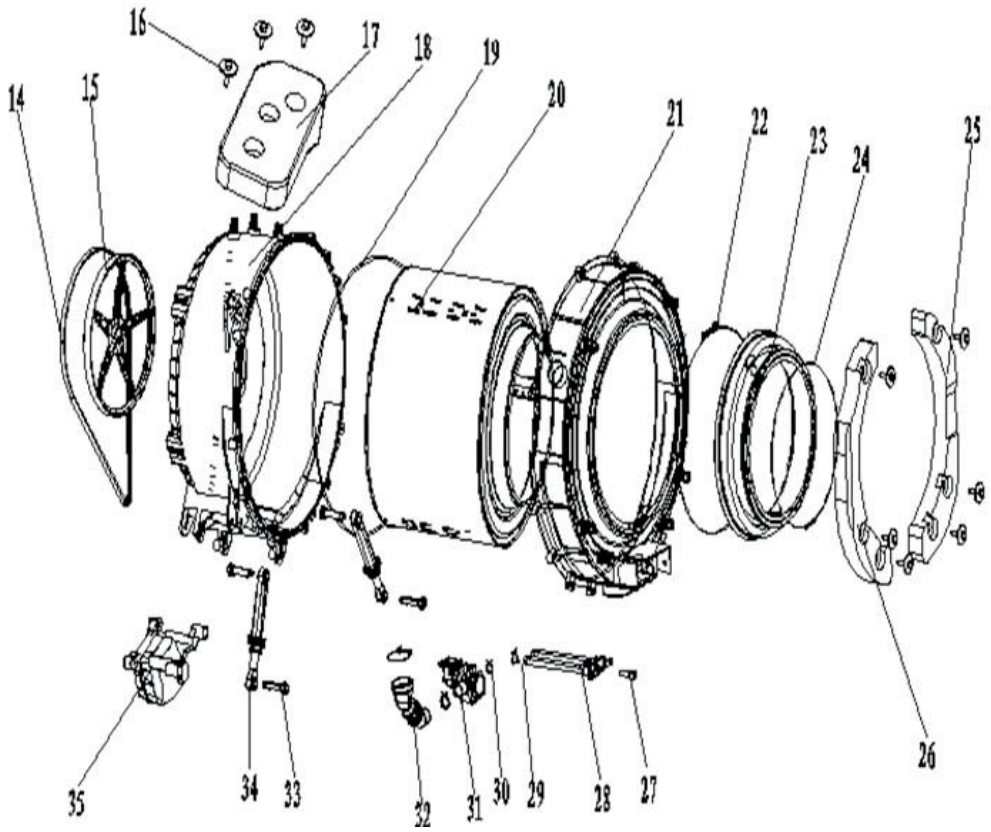
1. Cabinet_sub



01 PRESSURE SWITCH
02 PRESSURE CHAMBER
03 Service Panel
04 Leg_Sub
05 Water_ Inlet_Pipe_Kit
06 The Bend Of Drain Hose
07 Transport Bolt Kit
08 Rear_ Cover
09 Water_ Inlet_ Valve
10 FILTER
11 Suspension Spring
12 Spring Hanger
13 Top_ Bracket

6.EXPLORED VIEW & LIST OF PARTS

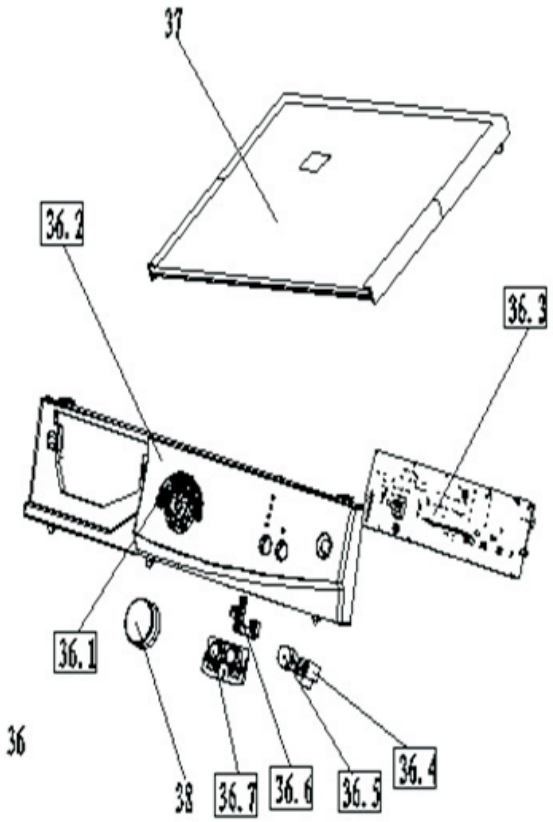
2. Tub_sub



14 Belt	25 Front_Right_Counterweight
15 Driving_Pulley	26 Front_Left_Counterweight
16 SCREW	27 NTC
17 UPPER COUNTERWEIGHT	28 HEATER
18 REAR TUB	29 HEATING BRACKET
19 Tub_Seal	30 HOSE CLAMP
20 Drum Kit	31 Pump
21 Front_Tub	32 Tub_Drain_Hose Kit
22 INNER GASKET CLAMP	33 Damper_Pin
23 GASKET	34 Damper
24 OUTER GASKET CLAMP	35 Motor

6.EXPLORED VIEW & LIST OF PARTS

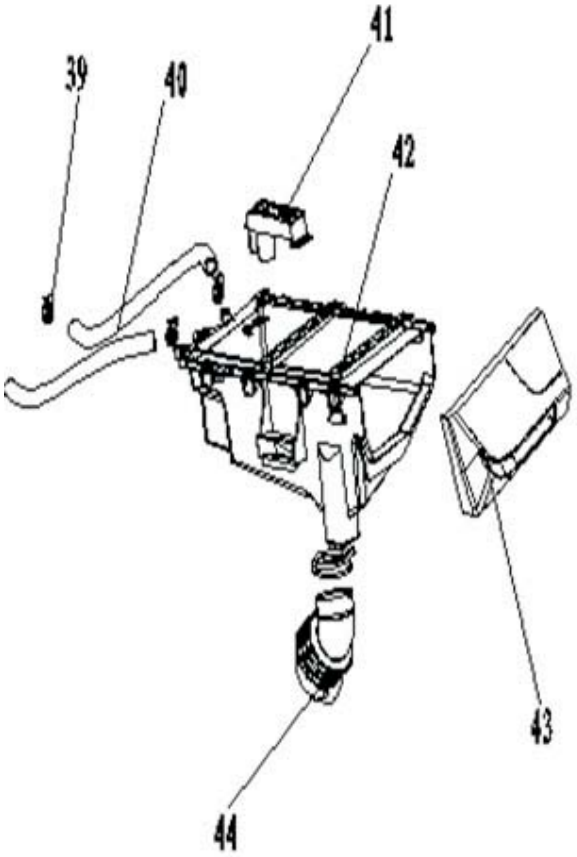
3. Top cover_sub



36	Control Panel Sub
36.1	Selec_Light_Transferrer
36.2	Control_Panel
36.3	PCB
36.4	Power Switch
36.5	Power Button
36.6	Light_Transferrer
36.7	Start_Pause_Button
37	Top_Cover_Board
38	Cycle_Select_Knob

6.EXPLORED VIEW & LIST OF PARTS

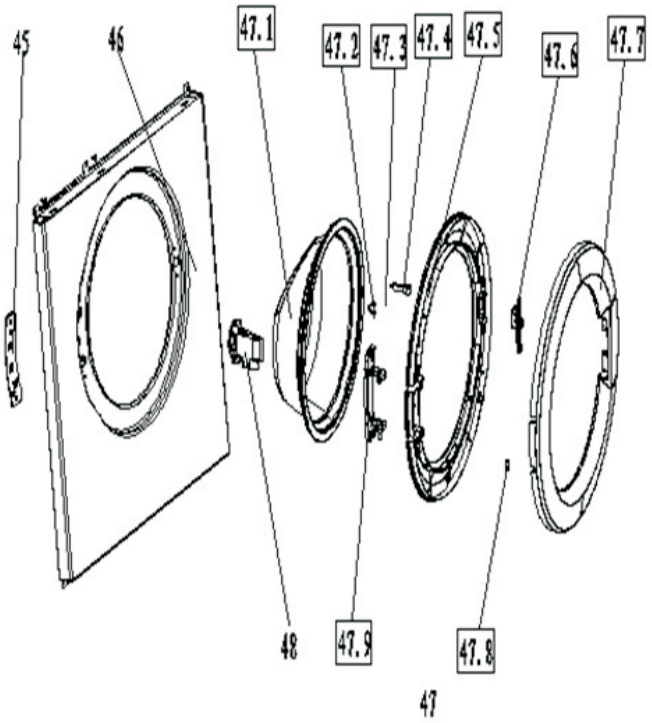
4. Dispenser_assembly



39 HOSE CLAMP
40 INLET HOSE
41 SOFTENER CAP
42 DETERGENT BOX
43 DRAWER PANEL
44 Tub Water Inlet Hose

6.EXPLORED VIEW & LIST OF PARTS

5. Door_assembly



Model MG52-6001/MG52-8002

45 DOOR SUPPORT PLATE
46 Front Panel
47 Door Sub
47.1 Door Glass
47.2 Door_Plunger_Spring
47.3 HOOK PIN
47.4 Door Plunger
47.5 Inner Ring
47.6 Door Handle
47.7 Outer_Frame
47.8 Door_Hinge_Pin_Cover
47.9 Door Hinge
48 Door Lock